

**APPENDIX A: MITIGATION MEASURES, INCLUDING
BEST MANAGEMENT PRACTICES**

MITIGATION MEASURES, INCLUDING BEST MANAGEMENT PRACTICES

Wildlife and Management Indicator Species

Construction activities shall remain within the defined boundaries of Highway 260 and FR 708. Proper sediment control features shall be placed at Fossil Creek.

Threatened and Endangered, and Forest Service Sensitive Species

Construction activities shall remain within the defined boundaries of Highway 260 and FR 708. Proper sediment control features should be placed at Fossil Creek.

Soils

Best Management Practices for sediment control and erosion around streambeds will be implemented at Fossil Creek. These will consist of:

- Trap sediment before it leaves the right-of-way.
- Utilize straw bales barriers or install silt fences as source reduction technique at storm water runoff locations to control sediments and reduce erosion at potential sediment discharge points during construction at Fossil Creek.
- Repair culverts as soon as possible to avoid run-off diversion into Fossil Creek.
- Minimize stockpiling of backfill materials.
- Compact backfilled soils as soon as feasible.

Impacted soils along Highway 260 will be revegetated using a Forest Service approved seed mix.

Watersheds and Water Quality

Insure proper sediment control management practices are in place during construction. Sediment control will include stabilizing areas at completion of construction as well as control during construction. Vehicle fueling and maintenance shall occur off-site.

Scenery

Vegetation in areas impacted by trenching and heavy equipment use along Highway 260 shall be reseeded with native grasses, herbs, and forbs that become quickly established and require no maintenance. The Forest Service shall approve the seed mix.

Recreation Opportunity and Settings

Notification of access restrictions and dates, particularly at trailheads, shall be made at the Red Rock and Payson Ranger District offices. Other restrictions effecting local traffic access including possible time delays will also be posted and will be included in local newspapers.

Cultural Resources

Specific mitigation measures, if any, as required by the Forest Archaeologists in consultation with the State Historic Preservation Office will be followed.

Vegetation and Noxious Weeds

Vegetation in areas impacted by trenching and heavy equipment along Highway 260 shall be reseeded with native grasses, herbs, and forbs that become quickly established and require no maintenance. The Forest Service will approve the seed mix that will be of native species in this area and will be certified weed free in Arizona.

Best Management Practices contained in the Three-forest Noxious Weeds Strategic Plan Working Guidelines (Phillips et al. 1998) shall be implemented for noxious weeds located in the project corridor.

The most relevant practices to this project include:

- Maintaining weed free off-site staging areas and using weed seed free fill dirt.
- Cleaning equipment and vehicles of mud, dirt and plant parts after working in an infested area.
- Revegetating disturbed ground with native species.

Detailed requirements of the National Forest Service are presented below:

Noxious Weed Survey and Mitigation Requirements

The removal of noxious plant matter from the construction area prevents the spread of plant material and weed-bearing soils that may get trapped in tires and the undercarriage of vehicles from being spread to other areas. Additionally, implementation of measure 2 precludes the need to spray each vehicle each time a vehicle enters the infested area.

- 1) Observe safety procedures detailed in NOXIOUS WEEDS JOB HAZARD ANALYSIS.
- 2) Before construction occurs, dig and pull noxious weeds in construction area. Refer to the Coconino National Forest Noxious Weed List for target species (category A and B only).
 - a. Burn pulled-up plant material in a confined container or with terra-torches or moisten plant material, bag in heavy-duty contractor bags, and allow to rot for several weeks before disposal at a landfill. Do not open bags with rotten plant material.
 - b. Once weeds are removed, spread a layer of clean (weed-free) soil or gravel, 3 inches deep over the weed-infested area. If this is not possible, scrape the top 10 inches of soil in the infested area, store in an area with no vehicle traffic, and cover with plastic. This soil may be used under the surface of the future roadbed. However, none of this soil should be within the top three inches of bare soil such as the soil along the road shoulders.
 - c. Any remaining weed infested soil not used under the roadbed should be buried 3-5 feet deep somewhere in the construction area.
 - d. Wet all soil before scraping or moving in order to prevent soil with weed seeds from becoming airborne or otherwise spread.
- 3) In areas with noxious weeds where the above treatment can not be implemented, vehicles and equipment that are driven through or parked in a weed infested area must be sprayed each time that vehicle leaves the area. Map wash sites within the project area for future monitoring of weed infestations.

- 4) All construction vehicles and equipment must be sprayed before coming onto NFS lands. A high pressure hose will be used to clear the undercarriage, tire treads, grill, radiator, and beds of any mud, dirt, and plant parts that may potentially spread the seeds or viable parts of noxious plants.
- 5) Any ground disturbing activities such as parking and staging must occur within the construction footprint. When construction activities are finished, these areas, like any other disturbed area in the construction zone, will be reseeded with a certified weed-free, native seed mix.
- 6) The use of off-site fill materials in the project area is discouraged. Utilize excavated substrate from on-site whenever fill substrate is needed. If on-site substrate is used, and if it contains weed seed, this soil should not be part of the top three inches of soil. Instead, weed-free soil will be used in the top three inches. If material is imported, the site where the fill source comes from should be surveyed for noxious weeds. Fill material cannot come from a source infested with noxious weeds.
- 7) Rehabilitate areas with disturbed soil by seeding with a weed-free, native seed mix tailored to match existing native vegetation in the project area.
- 8) Water used for dust abatement and other construction activities should be obtained from a source free of noxious plant seeds.
- 9) The locations for all Category A and B noxious plants must be mapped on a 1:24,000 scale map for entry into the Southwest Exotic Plant Mapping Program (SWEMP) database. Send copies of all survey forms and maps to the lead Forest Service district.